



Universiteit
Leiden

The Netherlands

Difficulties and dangers of CEA-targeted immunotherapy against colorectal cancer

Bos, Rinke

Citation

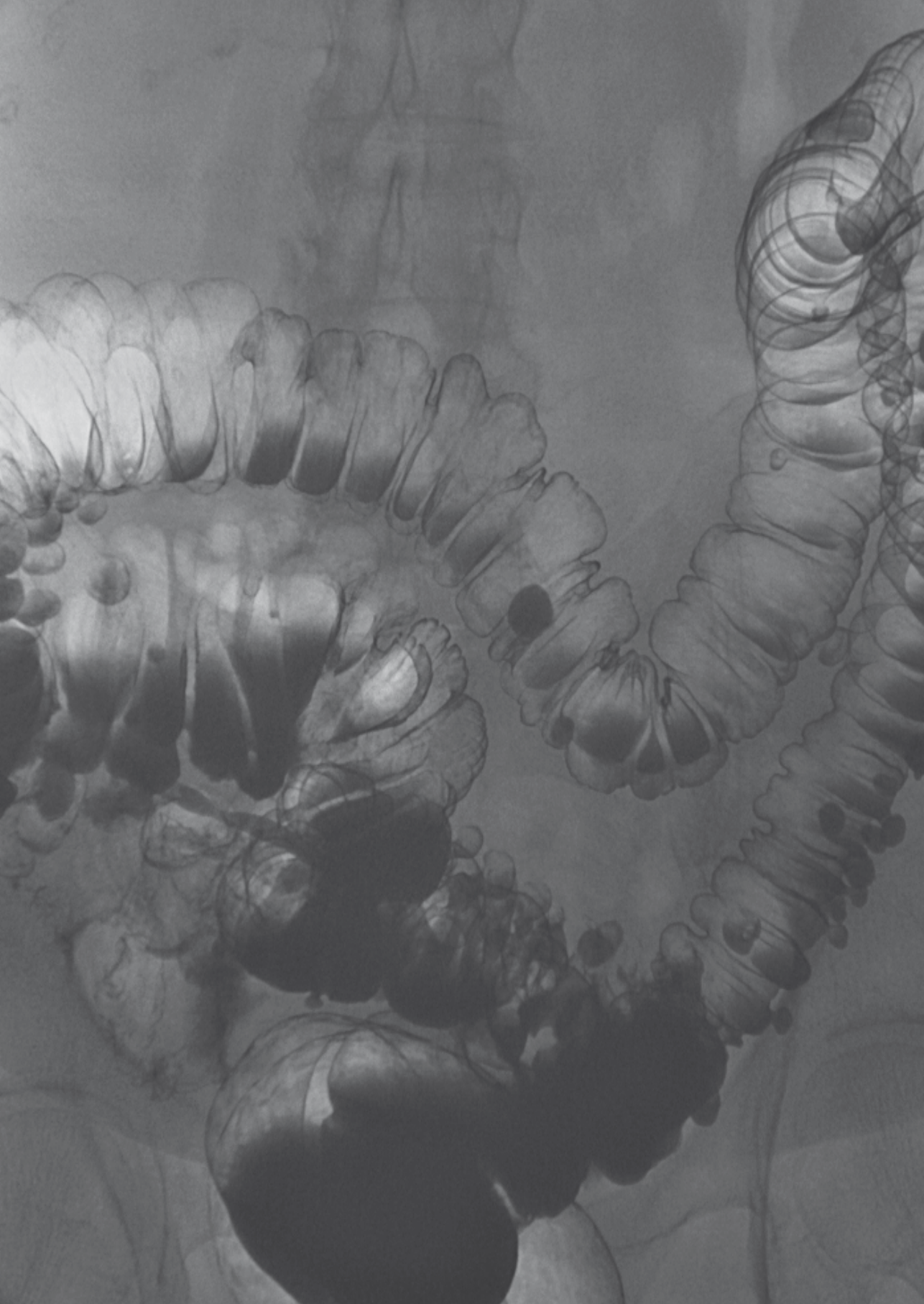
Bos, R. (2006, October 18). *Difficulties and dangers of CEA-targeted immunotherapy against colorectal cancer*. Retrieved from <https://hdl.handle.net/1887/4919>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/4919>

Note: To cite this publication please use the final published version (if applicable).



***Difficulties and dangers of
CEA-targeted immunotherapy
against colorectal cancer***

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van de Rector Magnificus Dr. D.D. Breimer,
hoogleraar in de faculteit der Wiskunde en
Natuurwetenschappen en die der Geneeskunde,
volgens besluit van het College voor Promoties
te verdedigen op woensdag 18 oktober 2006
klokke 16.15 uur
door

Rinke Bos
geboren te Maarheeze
in 1976



PROMOTIECOMMISSIE

PROMOTOR	Prof. dr. C.J.M. Melief
co-promotor	Dr. R. Offringa
referent	Prof. dr. T.N.M. Schumacher
overige leden	Prof. dr. F. Koning Prof. dr. J.H.F. Falkenburg Prof. dr. C.J.H. van de Velde Dr. S.H. van der Burg

The studies described in this thesis were performed in the Department of Immunohematology and Blood Transfusion of Leiden University Medical Center, Albinusdreef 2, 2333 ZA Leiden, The Netherlands and were financed by the Dutch Cancer Society (KWF) and Sanofi Pasteur Ltd. Toronto.

© Rinke Bos, 2006

Niets uit deze uitgave mag worden verveelvoudigd en/of openbaar gemaakt zonder voorafgaande schriftelijke toestemming van de auteur. No Part of this thesis may be reproduced in any form without written permission from the author.

ISBN 90-9020991-3

Beeld	Virtuele colonscopie aan de hand van CT scan beelden (<i>omslag</i>), dubbel contrast weergave van dikke darm met conventionele röntgen (<i>titelpagina</i>) en virtuele dissectie van het colon (<i>titelpagina's hoofdstukken</i>)
Gedicht	© J.A. Deelder, Rotterdam
Vormgeving	Sam Gobin, Leiden
Druk	Offsetdrukkerij Nautilus, Leiden

Financial support for the publication of this thesis was provided by Sanofi Pasteur Ltd. Toronto, the Dutch Cancer Society (KWF), Amgen B.V. Oncology and BD Biosciences.

CONTENTS

- 1 Introduction – 7**
- 2 Expression of a natural tumor antigen by thymic epithelial cells impairs the tumor-protective CD4⁺ T-cell repertoire – 19**
- 3 Different polarization of T-cell immunity by canarypox virus and DNA-based vaccines – 33**
- 4 Tumor regression and auto-immunity induced by immunotherapeutic modalities targeting carcinoembryonic antigen – 49**
- 5 Summary and General Discussion – 69**
- 6 Nederlandse samenvatting – 79**
- 7 Curriculum vitæ – 85**
- 8 Nawoord – 87**